

Short Tutorial on Federal Tier II and CA LEV Vehicle Standards

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NORTH CAROLINA
DIVISION OF AIR QUALITY



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Vehicle Emissions Standards in the US

■ Federal – Currently “Tier II”

- Adopted in 1999
- Phased in 2004 – 2009
- Covers all States
- Federal Clean Air Act (CAA) Section 209(a) “preempts” states from establishing separate standards

■ California – Currently “CA LEV – II”

- CAA Section 209(b) exempts California from the Sec 209(a) preemption
- However, CA must obtain a waiver from EPA for state standards to be effective
 - CA standards must be equal to or more stringent than the Federal standards

Features of the Federal Tier II Standards

- Emissions certified in 8 Categories (“BINS”) – NOx limits at 120,000 miles Range from 0.20 to 0.00
- Manufacturers must meet a fleet average for NOx of 0.07 grams per mile – compliance determined at time of Certification with Manufacturer
- Warranty - 8 years / 80,000 miles – emissions components

What are the Components and Features of the CA Vehicle Standards?

■ LEV-II: “Low Emitting Vehicles”

- Reduces “Criteria” and Precursors to Address Ambient Air Quality
- Phased in Between MY 2004 and 2010
- Sec 209 Waiver Granted

■ “Pavley”: Standards

- Address CO2 and other Green House Gases (GHG) from Vehicles
- Sec 209 Waiver Applied for in December 2005 – Not yet Granted
- Not Effective Until Waiver Granted
- Originally Hoped to be Effective with MY 2009 – Currently can not be any Earlier than MY 2010
- Several Law Suits Filed – No Stays in Effect

Components and Features of the CA Vehicle Standards Cont'd

■ LEV

- Technology Classifications – LEV II, ULEV, SULEV, ZEV, PZEV, ATPZEV
- Cars Plus Medium Duty up to 14,000 pounds
- Required Statewide Fleet Average for Hydrocarbons (NMOG in CA)
- Enforceable at the State Level
- Warranty – 3 years / 50,000 miles – 7 years / 70,000 miles

■ “Zero Emitting Vehicles” (ZEV)

- Phased in MY 2005 – MY 2018
- Can be True ZEVs or ZEV Equivalents
 - PZEVs – Very Low emissions and Zero Evaporative Emissions
 - 15 years / 150,000 mile warranty
 - ATPZEVs – Advanced Technology – Hybrids and True ZEVs

■ PAVLEY

- Regulates CO₂, Methane, Nitrous Oxide, HFC (R 134a)
- Phased in MY 200? – MY 2016
- Cars / light Duty – to 8500 pounds – Medium Duty to 10,000 pounds

How Can Other States Adopt CA Standards?

- **Section 177 of CAA Allows States to Adopt CA Standards**
- **Most States Can Adopt the CA Standards If:**
 - EPA has Granted CA a Waiver und Sec 209
 - The Adoption Does Not Create a “Third Vehicle” Requirement
- **Does a State Have to Adopt All of the CA Program?**
 - Some Debate on This Issue
 - It Depends
 - Hinges on Whether a “Third Vehicle” Requirement is Created
- **Does the Pavley Provision Bring up the Issue of a Third Vehicle? – Yes**
 - If Pavley Prevails, States must have Pavley
 - If Pavley Fails to Become Part of the CA Program, State Cannot Adopt it

State Program Options

Option	Program Type	Program Description
1	Federal Tier 2	<ul style="list-style-type: none"> ■ Default Program ■ No legislation required
2	California LEVII – (a)	<ul style="list-style-type: none"> ■ All MY 2010 and later vehicles sold or registered
3	California LEVII – (b)	<ul style="list-style-type: none"> ■ All MY 2010 and later vehicles sold or registered ■ Fleet average requirement to maximize emission reductions
Add on to option 2 / option 3	California LEVII & ZEV	<ul style="list-style-type: none"> ■ ZEV (Zero Emission) ■ PZEV (5 PZEV = 1 ZEV) ■ AT-PZEV (~2.5 AT-PZEV = 1 ZEV)

Consideration of the CA - Pavley Standards in NC

■ Adopt LEV Standard as Outlined Above – Without Pavley

- If Pavley Waiver is Not Granted and No Court Overturns EPA Decision – No Further Action by Legislature
- If Pavley Become Effective, Legislature Must Add Pavley to NC Standards

■ Adopt LEV Standard as Outlined Above – With Pavley

- If Pavley Waiver is Not Granted and No Court Overturns EPA Decision – Action by Legislature to Remove Pavley is Required
- If Pavley Become Effective, No Further Action by Legislature

■ Perhaps an Escape Clause in the Legislation would Prevent Having to Return to Legislature to “Correct” the Pavley portion



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